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Research Paper

Comparative Impacts of Fixed, Growth, and Mixed Mindsets on EFL Learners' Mindsets

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Abstract

The present study was conducted to investigate the comparative impacts of three types of EFL teachers' mindsets on EFL learners' mindsets. The participants of the study were English Translation undergraduate students (both female and male with the age ranging of 18-35) who were selected according to convenience non-random sampling from three classes of English Grammar 1 at both Islamic Azad Universities of Karaj and Shahriyar. The total number of students in each class was 30. The course lasted 16 successive sessions. Participants were assigned into three experimental groups. At the outset, a Mindset Assessment Profile (MAP) adopted from Mindset works, INC (2002-2012) on a scale of *disagree a lot* to *agree a lot* was administered among participants in all three experimental groups. The researchers provided interventions in terms of fixed, growth, and mixed mindsets to teach English grammar. At the end of the course, the same Mindset Assessment Profile (MAP) as the one administered in the pretest phase was administered among participants in all three groups and it was demonstrated that the EFL teacher's type of mindset can significantly influence EFL learners' mindsets. Consequently, it was determined that helping students adopt growth mindset hinges on raising teachers' awareness about the importance of their own mindsets as well as helping them to grow their mindsets. This study includes a variety of instructional implications for both EFL teachers and EFL learners.

Keywords: Fixed mindset; Grammar Achievement; Growth Mindset; Mindset; Mixed Mindset

تأثیرات مقایسه ای ذهنیت های ثابت، رشد و ترکیبی بر ذهنیت زبان آموزان انگلیسی

پژوهش حاضر جهت بررسی مقایسه ای سه نوع طرز فکر متفاوت معلم در تدریس روی طرز فکر یادگیری زبان آموزان انجام شد. شرکت کنندگان در این پژوهش دانشجویان (پسر و دختر با طیف سنی ۱۸ تا ۳۵ سال) دوره کارشناسی رشته مترجمی زبان انگلیسی بودند که بر اساس نمونه گیری غیرتصادفی و از سه کلاس گرامر انگلیسی یک دانشگاه های اسلامی واحد کرج و شهریار انتخاب شدند. تعداد کل دانشجوین در هر کلاس سی نفر بود و دوره ۱۶ جلسه طول کشید. بر این اساس شرکت کنندگان به سه گروه آزمایشی تقسیم شدند. در آغاز دوره یک پرسشنامه طرز فکر سنجی با طیف «موافقت زیاد» تا «مخالفت زیاد» بین شرکت کنندگان در سه گروه توزیع و پاسخنامه ها گردآوری شد. سپس تدریس گرامر یک انگلیسی به شرکت کنندگان در سه گروه آزمایشی از طریق سه نوع طرز فکر متفاوت (طرز فکر ثابت-طرز فکر رشدپذیر و طرز فکر ترکیبی) در طول دوره صورت پذیرفت. متغیر مستقل سه نوع طرز فکر آموزشی متفاوت معلم و متغیر وابسته طرز فکر یادگیری زبان آموزان در سه گروه آزمایشی بود. در پایان و پس از توزیع مجدد پرسشنامه طرز فکر سنجی بین دانشجویان مشخص شد که طرز فکر آموزشی معلم به شکل چشمگیری روی طرز فکر یادگیری زبان آموزان تاثیرگذار است. در نتیجه مشخص شد رشد طرز فکر زبان آموزان به شکل چشمگیری به آگاهی معلمان نسبت به تاثیر طرز فکرشان روی طرز فکر زبان آموزان و کیفیت یادگیری و در نتیجه رشد طرز فکر خود معلمان وابسته است. این پژوهش شامل بازخوردهای آموزشی متنوعی برای مدرسان زبان انگلیسی و زبان آموزان بود.

واژگان کلیدی: ذهنیت ثابت، دستور گرامر، ذهنیت رشد، ذهنیت، ذهنیت ترکیبی

Introduction

As we know, the history of language teaching has gone through tremendous fluctuations from day one. Method era was a period during which a bunch of methods with predetermined principles and techniques were introduced and practiced emphasizing what to teach and how to teach. Each method used to claim to be the miracle of its own time, a final and binding remedy of that chronic disease in learning a second or foreign language. Methods emerged and subsequently faded away since in their precepts, there was no room left for the learners themselves, and the psychology of learners was considered neither important nor crucial. The movement of finding an alternative method (to be regarded as the best method) finally led to the movement of finding an alternative to methods which itself was the outset of post-method era (Kumaravadivelu, 2006).

One of the most significant features of post-method era is the importance attached to cognitive and affective factors in the process of learning and learners were regarded as having such psychological intricacies that impact the quality and quantity of learning. This shift of focus from "whats" and "hows" of teaching to the psychology of learners and their cognition paved the way for proposing different theories of learning and intelligence.

There have been numerous and sometimes opposing theories and approaches about human intelligence, out of which two are so comprehensive and also related to the significance of the present study: the *Entity approach* which views intelligence as a stable and fixed human attribute. People advocating such a view tend to prove themselves to others; to be seen and considered as intelligent, talented and genius, and the *Incremental approach* which views intelligence as growing, malleable, fluid, and changeable. People adhering to such a view enjoy the satisfaction coming from the very process of learning and often see opportunities to get better (Kammrath & Dweck, 2006).

As can be seen, these theories are not innovative as far as human cognition is concerned. However, these are the underpinnings of the mindset approach as proposed by Dweck (2008) who proposed two types of mindsets (i.e., growth mindset based on the incremental view and fixed mindsets based on the entity view) which demonstrate how people adopting or leaning toward one of these mindset types approach the world around themselves, their relationships, business, sport, love, parenting, school, and education differently. However, she has implicitly proposed a third mindset (i.e., people who tend to demonstrate a combination of fixed and growth mindset qualities in their behaviors and even sometimes lean toward either fixed or growth side in different situations).

The theoretical underpinnings of mindsets demonstrate the long-rooted history of the approach. However, what makes such an approach innovative, significant, and of crucial importance is the practical application of these theories in different domains of life. The quality of modern life requires human being to get familiar with psychology of success and this, on its own, necessitates understanding the nature of human mindset and the very factors making and shaping it.

More significantly, in education and namely research conducted in different areas of second language acquisition such affective factors as motivation, self-regulation, stress, willingness to communicate, self-confidence, have mostly been considered as independent variables influencing the quality of teaching and learning; pursuant to the theory of mindsets all these factors are to be considered as dependent variables as far as learners and teachers' mindsets are considered (Dweck, 2013).

Moreover, the domain-specific understanding nature of mindsets from a language perspective as an independent academic requires studies focusing solely on language mindsets. Language learning has long been argued to be a distinctive educational domain since it includes dynamics



not only within the class but also outside the classroom and in interactions with target language speakers.

Therefore, investigation of language through mindsets from a domain-specific perspective could reveal a number of problems. Such problems concern the ignorance of the teachers' mindsets in our educational system. In hiring teachers and employing faculty members, the priorities are type of university they have graduated from, their averages, research backgrounds, teaching experiences, and lots of other sometimes non-relevant factors. However, teachers' mindsets are belittled and ignored and that is what they carry with themselves to their classes instead of their certificates. And this is their mindsets that could influence their standard setting at the outset, formative and summative assessments, interactions with their students, feedback orientation, views of praise and punishment, students' mistakes and errors, students' setbacks and failures, views of the influence of students' abilities as well as their tenacity, persistence, and perseverance, judgments, students' motivations and self-regulation as well as their overall teaching orientation. This research is intended to investigate three different types of EFL teachers' mindsets (fixed, mixed, and growth-mindsets) on EFL learners' mindsets.

Literature Review

Learners in language domain hold different and sometimes rather opposing views about the nature of language ability and these contradictory views have been reflected in many studies pertaining to psychology of language and applies linguistics (Horwitz, 1999; Mori, 1999; Wenden, 1998). However, focusing on learners' beliefs about language aptitude is a recent trend in research on language ideology. Ryan and Mercer (2012) concluded that people hold different and even opposing views with regard to the malleability and fixedness of language intelligence which is consistent with earlier research about language beliefs. The findings of their studies demonstrated a very interesting fact concerning people holding both types of such beliefs as fixedness and malleability specially with respect to age sensitivity; such that some people believe in the early age fixedness of language skill. By the same token, Henry (2014) investigated learners' beliefs about learning and found that some learners believed in the fixedness of language acquisition as a natural gift and some others advocated a malleable view of the process.

Accordingly, Lou and Noels (2016) assessed language mindsets through an instrument through three major categories of fixed and growing approaches about language learning. The first instrument was to be called general language intelligence beliefs (GLB). These include beliefs concerning malleability and fixedness of language learning. The second one was related to the fixedness or malleability of second/foreign language aptitude (L2B). And finally, the last category is beliefs pertaining to age sensitivity and language learning (ASB). Their results demonstrated that these beliefs emanated from the very theoretical underpinnings of entity (fixedness) versus incremental (malleability) views of learning. They also found evidence concerning the very domain-specific nature of language mindsets differentiating it from such other academic domains as math, sport, and general intelligence.

Another study was conducted by Claro, Paunesku, and Dweck (2016) in order to investigate the influence of such structural factors as socioeconomic background, and psychological factors such as students' beliefs about their abilities on academic achievement. The participants were high school students from Chile. They investigated the interaction between these factors on a systemic level. The results indicated that family income was to be regarded as a determining factor of achievement. However, they found that promotion of a growth-mindset (the belief that intelligence is not fixed and can be developed) was a significantly determining indicator of achievement demonstrating a positive relationship with achievement across all of the socioeconomic strata. At the end, it was concluded that students' mindsets may temper the effects of economic status on a systemic level.



Ocampo (2016) demonstrated that changing students' mindsets about setbacks and failures could help them not only improve their speaking ability but also free them from their fears concerning making mistakes. Accordingly, stress and anxiety could be alleviated or even eradicated through converting the traditional classroom to a context where failure is embraced and pave the way for further learning opportunities.

Paunesku et al. (2015), in their study, conducted as one of the most recent ones in the area of mindsets concluded that mindset intervention could improve students' academic achievement. Participants of the study were a sample of 1,594 high school students from 13 diverse high schools across the U.S. Accordingly, they provided an online mindset intervention resulting in a 6.0% increase in acceptable grades of C and higher. While those in the control group didn't end up with such improvements in their grades. Other studies have demonstrated a positive relationship between growth mindset and achievement (De Castella & Byrne, 2015; Diseth, Meland, & Bredablik, 2014)

However, a full-fledged review of literature demonstrates lack of systematic research on investigating the influence of teachers' mindsets on students' mindsets. In most of the studies conducted so far, mindsets have been investigated as an independent variable influencing different domains of language and learning. We know that teacher's mindset, above all, is supposed to influence the students' mindsets and they do not teach mindsets directly; they practice their mindsets through their instruction. Therefore, we need to see the influence of teachers' mindsets on students' mindsets prior to any such investigations in different domains of language and learning.

Accordingly, the present study was conducted on one of the most controversial areas of second language acquisition (i.e., grammar) through one of the most recent and appealing areas in research conducted on second language acquisition (i.e., mindsets). Therefore, to get the feet wet into this process, a research question was presented at the outset:

RQ. Does the type of teacher's mindsets have any impact on EFL learners' mindsets?

Method

As it was explained in detail in previous section, the present study was conducted in order to investigate the impact of three different types of EFL teachers' mindsets (fixed, mixed, and growth mindsets) on EFL learners' mindsets. Therefore, the study **was conducted** in three different EFL classes. In one class, the researcher taught the subject matter-Grammar-through fixed-mindset. In the next class, grammar was instructed through growth-mindset. And finally, in the third class, a mixed-mindset approach was adopted and utilized.

Participants

The participants of this study were English Translation undergraduate students (both female and male with the age ranging of 18-35) who were selected according to convenience non-random sampling from three classes of English Grammar 1. The total number of students in each class was 30. They enrolled for this course for the second semester of the academic year 2017-2018 at both Islamic Azad Universities of Karaj and Shahriyar branches. The course lasted 16 successive sessions (once a week and each session 1 hour and 30 minutes). Participants were assigned into three experimental groups. The researcher provided interventions in terms of Fixed-mindset (Experimental group 1), growth- mindset (Experimental group 2), and mixed-mindset (Experimental group 3) to teach English grammar to the EFL learners.

Instrumentation

The instruments utilized in this research are as follows:

Mindset Assessment Profile (MAP) adopted from Mindset works, INC (2002-2012) (Appendix C). It included 8 questions on a scale of disagree a lot to agree a lot (6 items of agree a lot, disagree, disagree a little, agree a little, agree, disagree a lot).

Text book: Understanding and using English grammar written by Azar and Hagen (2009). As a classic developmental textbook, *understanding and using English grammar* is a comprehensive reference grammar as well as a stimulating and teachable classroom text recommended by numerous teachers and researchers around the globe. This book has been frequently revised and updated by the author since its first publication so as to meet the rapidly and increasingly changing needs of the learners. Some of the new features are: innovative warm-up exercises that precede the grammar chart, a *use to usage* direction in teaching English grammar, structure-based listening exercises ranging from casual speech to formal academic readings that highlight the targeted grammar structures, greatly-expanded speaking practice with extensive pair, group, and class work, corpus-informed syllabus that reflects the discourse patterns of spoken and written English, and audio CDs and listening scripts. Presently, this book is widely being used in such different educational systems in Iran as universities, language institutes, and schools as one of the most valid and reliable grammar sources.

This book was selected as the course book in all three experimental groups. The first ten units of the book including five units on *English tenses*, one unit on *subject-verb agreement*, one unit on *nouns*, one unit on *pronouns*, and finally, two units on *modals* were to be taught.

Procedure

At the very outset, the reliability of the Mindset Assessment Profile (MAP) was calculated. Therefore, the test was administered among a group of participants with the same characteristics as those of the study and the acceptable reliability of .82 was calculated.

The researcher started the course with introducing the course book and suggested source books as well as the course syllabus. The course book was *understanding and using English grammar* written by Azar and Hagen (2009). To assure the same procedure and instruction as stated above, the same teacher (the researcher himself) taught grammar in all three groups adopting a different type of mindset in each experimental group.

The methodology for teaching grammar included an inductive approach to teaching grammar (i.e., in each unit the participants were first presented with details and examples as well as exercises). Next, the rules were explained to them.

A *use to usage* direction of instruction was another important step taken in teaching grammar to the participants. For example, in teaching English tenses, the participants were first presented with the uses of each tense in different communicative situations. Upon teaching the different communicative functions or uses of grammar, the researcher described the grammatical structure of the tense (i.e., the usage).

Formative assessment was another important characteristic of this course. Accordingly, assessment was seen as an aid to teaching and the instruction and it was embedded into the instruction right from scratch. For example, upon teaching simple present tense (as explained in the above-cited section), the students were provided with texts including different communicative functions (uses) of simple present tense and were asked not only to identify them but also to determine the communicative function type as explained above. They were then provided with different exercises to assess their understanding of different grammatical functions (usages) of simple present tense.

E-learning through social networks, cooperative learning, and noticing (consciousness raising) for understanding (competence) the grammar on one hand, and integration of grammar in writing

and speaking for using (performance) on the other hand were among other steps taken so as to teach grammar to the participants in all three groups.

To monitor the performance of the students even after the class, the researcher created a telegram group where he could send more exercises, some of which were to be done for next session and some others to be done through collaborative discussion and learning in the group. Some educational clips on grammar were downloaded from *Aparat* and *Youtube* and forwarded to the group for students to be exposed to different teaching styles of grammar. All of the above-cited steps were the same among participants of all three groups. However, the participants in each group received and were exposed to a different mindset type (fixed, growth, and mixed mindsets) throughout the course.

However, since the importance of adopting growth-mindset attitude among learners has already been established in literature through numerous studies, the present study was conducted so as to investigate the impact of the teacher's type of mindset on EFL learners' mindsets. To do so, the teacher adopted three different types of mindsets in three different experimental groups to teach English grammar. The independent variables in this study were human mindsets which were grouping variables to three levels of fixed-mindset, growth-mindset, and mixed-mindset. The dependent variable was EFL learners' mindset.

Treatment in group one (Fixed-mindset)

The teacher in the first experimental group adopted a fixed-mindset attitude, the most important tenet of which was that language learning was a fixed and innate ability that cannot be learned, developed and grown through learning. Learning was there to prove it rather than improve it. Accordingly, setbacks and failures were to mean that the student did not have the innate ability to learn. Therefore, the teacher promoted the idea that if you can learn English grammar effortlessly, it means that you have the innate ability to learn it; otherwise, without that natural talent, you can hardly hope to reach the same or even similar levels of achievement. Both explicitly and implicitly, this ideology promoted and preached by the researcher through the course especially in his feedback, assessments, judgments, view of mistakes and errors as well as setbacks and failures.

As far as students' setbacks and failures were concerned, they were supposed to avoid whatever learning activities that could lead to setbacks and failures since the teacher in this group believed that when their ability was threatened or undermined through setbacks and failures, it meant that the students were not competent enough to learn easily and without any challenge. Consequently, rather than focusing on learning, the teacher focused on his students' final performance. He did not want them to look dumb. Therefore, they did their bests so as not to face whatever challenging situations. They would rather easy tasks that are certain to be fulfilled easily.

Moreover, the teacher promoted help avoidance as much as possible since it was a sign that they did not have the required ability to learn it through their own resources. He also avoided setting high standards or objectives for the course so as to prove them that they can learn English grammar easily.

The teacher praised the students for their innate ability to learn, rather than their strategies, efforts, and tenacity through such messages as: well done, you are the best student in this class, or you are the most talented student that I have ever seen. The teacher's feedback was totally comfort-oriented (i.e., any type of feedback that assured them of their intelligence rather than any other type of (negative) feedback that targeted their innate abilities and encouraged them to try strategies and exert more effort). He only judged the overall performance of his students and belittled the process of learning since he believed everyone had a specified level of intelligence which could define them and their performance.



The teacher promoted the fixed-mindset idea in the class to such an extent that students resorted to a variety of strategies to look smart. They were afraid that struggling would mean they were not smart and stopped doing things that were challenging. Therefore, He avoided any difficult task which was threatening to the students' perceived level of intelligence. The tasks were designed so that students could fulfill them. Accordingly, students' degree of achievement was assumed to be determined by the amount of their innate abilities to learn rather than strategies, efforts, and academic tenacity of the learners.

Errors and mistakes were considered as the indicators of lack of the ability to learn and that was why students tried hard so as not to make any mistakes. Fixed mindset views teachers as judges who observe your performance closely and who evaluate and judge you immediately based on your performance. That is why the teacher was seen as an evaluator and judge in this group.

Treatment in group two (Growth-mindset)

The same procedure of inductive instruction of grammar, a use to usage direction of instruction, formative assessment, E-learning through social networks, cooperative learning, and noticing as those of the fixed-mindset group was adopted and enforced in the growth-mindset group.

However, the teacher adopted a growth-mindset attitude in this group. Therefore, he promoted the idea that although the students were born with different innate abilities in different walks of life, their language ability was malleable and could be grown through practice, effort, tenacity, and challenge seeking. Moreover, the growth mindset teacher in this group did not perceive setbacks or failures as a sign of lack of intelligence or something threatening to his students' overall performance. Rather, he considered them as informative and challenging. Accordingly, learning was seen as a tool that did not define the students' innate abilities; it was there to improve them rather than prove themselves.

The growth mindset teacher believed that students with growth mindsets, in their path of improvement and success, try whatever possible help seeking solutions. They were not afraid of being judged with regard to their intelligence. What was important to them was the very learning process. They sought help from all possible resources in order to pave their path of success. The belief in malleability of intelligence encouraged the teacher to set and pursue high standards in this class. High standards were not considered as threatening because the students were not afraid of setbacks or failures as they were not to be seen as indicators of their intelligence level.

As far as praising students was concerned, attention and approval were directed at their efforts and their strategies rather than their innate abilities through such messages as: well done, you made it because of you effort. Tremendous, that was the outcome of your persistence, tenacity, and perseverance. Moreover, the growth mindset teacher promoted strategy-oriented feedback rather than comfort-oriented feedback. Since feedback was not there to judge students' knowledge and ability to learn; it was there to be an important ingredient of teaching that could facilitate the learning process.

The teacher believed that learning was not an insight which was inspired by the degree of innate ability, rather it was a process, amount and quality of which was determined the degree of effort, tenacity, and persistence. Therefore, the teacher judged the amount of tenacity put forth in the process of learning. In fact, a process-oriented attitude was adopted and promoted in this group rather than a product-oriented one as adopted and promoted by the fixed mindset teacher.

The focus of students in this group was to get smarter and smarter through practice, strategy, and tenacity rather than looking smart through avoiding difficult tasks and welcoming easy tasks. Hence, difficult tasks were welcomed since they were challenging and informative.

Finally, Errors were seen as normal and useful parts of learning process; the errors were used to help students improve their knowledge. The growth mindset learners viewed their teacher as

their resource and guides and were not worried about their feedback since they were not seen as judges and evaluators of their performance.

Treatment in group three (Mixed-mindset group)

Mindsets are not dichotomous (i.e., we cannot divide the people to either absolutely fixed-mindset or growth mindset categories). Rather, they shall be seen on a continuum. The teacher in this group demonstrated amalgamation of both fixed and growth mindset qualities called mixed-mindset in this research. Accordingly, participants in this group, in addition to the same procedure of inductive instruction of grammar, a use to usage direction of instruction, formative assessment, E-learning through social networks, cooperative learning, and noticing as those of the other two groups, were exposed to both fixed and growth-mindset qualities throughout the course. Accordingly, he adopted both fixed and growth mindset attitudes as described in the experimental groups one (fixed-mindset group) and two (growth mindset group) simultaneously. For example, while he praised his students for their tenacity, effort, and perseverance to learn grammar (growth-mindset approach), mistakes were seen as sign of incompetence by the teacher throughout the course (fixed-mindset attitude).

Data Analysis

At the end of the course, the same questionnaire of Mindset Assessment Profile administered at the outset was distributed among the participants in all three experimental groups. The design of the study was quasi-experimental since there were three experimental groups and no control group. All participants were selected according to convenience non-random sampling.

Results

Testing Normality Assumption

The normality of the present data was checked through skewness and kurtosis ratios over their standard errors (Table 1). It displays the results of the skewness and kurtosis and their ratios over the standard errors. Since the ratios of these statistics over their standard errors were lower than +/- 1.96, it can be claimed that the assumption of normality was retained.

Table 1

Descriptive Statistics; Testing Normality of Data

Group		N	Skewness		Kurtosis		Ratio	
			Statistic	Std. Error	Statistic	Std. Error		
Fixed	PreMindset	30	-.245	.427	-0.57	-.630	.833	-0.76
	PostMindset	30	-.092	.427	-0.22	-.260	.833	-0.31
Growth	PreMindset	30	-.039	.427	-0.09	.141	.833	0.17
	PostMindset	30	.486	.427	1.14	.347	.833	0.42
Mixed	PreMindset	30	.013	.427	0.03	-.460	.833	-0.55
	PostMindset	30	-.670	.427	-1.57	.110	.833	0.13

Exploring the Null-Hypothesis

Since the assumptions related to one-way ANCOVA were not retained, two separate one-way ANOVA were run to compare the groups' means on the pretest and posttest of mindset. The results are discussed below.

Comparing Groups on Pretest of Mindset

A one-way ANOVA was run to compare the three groups' means on the pretest of mindset in order to prove that they enjoyed the same knowledge on mindset prior to the main study. Before discussing the results, it should be noted that the assumption of homogeneity of variances was not retained. Table 2 displays the results of the Levene's test. The significant results of the test (Levene's $F(2, 87) = 6.08, P < .05$) indicated that the assumption of homogeneity of variances was not retained. That is why the results of robust tests of Brown-Forsythe and Welch are reported in Table 3.

Table 2

Test of Homogeneity of Variances; Pretest of Mindset by Groups

		Levene Statistic	df1	df2	Sig.
Pretest	Based on Mean	6.368	2	87	.003
	Based on Median	6.089	2	87	.003
	Based on Median and with adjusted df	6.089	2	72.849	.004
	Based on trimmed mean	6.339	2	87	.003

Table 3 displays the descriptive statistics for the groups on the pretest. The results indicated that the mixed mindset ($M = 26.27$), growth mindset ($M = 26.23$) and fixed mindset ($M = 27.83$) groups had almost the same means on the pretest.

Table 3

Descriptive Statistics; Pretest of Mindset by Groups

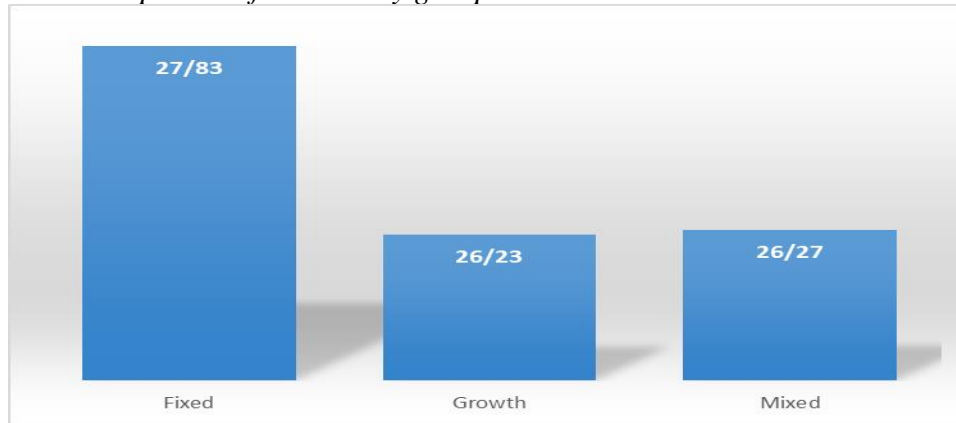
	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Fixed	30	27.83	1.852	.338	25.18	26.56
Growth	30	26.23	1.135	.207	25.81	26.66
Mixed	30	26.27	2.303	.421	25.41	27.13
Total	90	26.12	1.816	.191	25.74	26.50

Table 4 displays the main results of the robust one-way ANOVA. The results ($F(2, 70.09) = .442, p > .05$) indicated that there were not any significant differences between the groups' means on the pretest of mindset.

Table 4

Robust Tests of Equality of Means; Pretest of Mindset by Group

		Statistic	df1	df2	Sig.
PreMindset	Brown-Forsythe	.442	2	70.090	.644

Figure 1*Means on pretest of mindset by groups***Comparing Groups on Posttest of Mindset**

A one-way ANOVA was run to compare the three groups' means on the posttest of mindset in order to probe the null-hypothesis. Before discussing the results, it should be noted that the assumption of homogeneity of variances was retained. Table 5 displays the results of the Levene's test. The significant results of the test (Levene's $F(2, 87) = .281, P > .05$) indicated that the assumption of homogeneity of variances was retained.

Table 5*Test of Homogeneity of Variances; Posttest of Mindset by Groups*

		Levene Statistic	df1	df2	Sig.
Posttest	Based on Mean	.378	2	87	.686
	Based on Median	.281	2	87	.755
	Based on Median and with adjusted df	.281	2	82.604	.755
	Based on trimmed mean	.391	2	87	.677

Table 6 displays the descriptive statistics for the groups on the posttest. The results indicated that the growth mindset group ($M = 31$) had the highest mean on the posttest. This was followed by the fixed ($M = 25.87$) and mixed mindset ($M = 26.70$) groups.

Table 6*Descriptive Statistics; Posttest of Mindset by Groups*

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean	
					Lower Bound	Upper Bound
Fixed	30	25.87	2.119	.387	27.04	28.62
Growth	30	31.00	2.017	.368	30.25	31.75
Mixed	30	26.40	1.734	.317	25.75	27.05
Total	90	28.41	2.739	.289	27.84	28.98

Table 7 displays the main results of the one-way ANOVA. The results ($F(2, 87) = 43.11, p < .05$, partial eta squared = .498 representing a large effect size) indicated that there were significant differences between the groups' means on the posttest of mindset. Thus, the null-hypothesis **was rejected**.

Table 7
One-way ANOVA; Posttest of Mindset by Groups

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	332.422	2	166.211	43.118	.000
Within Groups	335.367	87	3.855		
Total	667.789	89			

Table 8 displays the results of the post-hoc comparison tests. The results indicated that; the growth mindsetting group ($M = 31$) significantly outperformed the mixed mindsetting group ($M = 26.40$) (Mean Difference = 4.60, $p < .05$).

Table 8
Pairwise Comparisons; Posttest of mindset by Groups with Pretest

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval for Difference	
					Lower Bound	Upper Bound
Mixed	Growth	-3.167*	.507	.000	-4.43	-1.90
	Fixed	1.433*	.507	.022	.17	2.70
Growth	Mixed	3.167*	.507	.000	1.90	4.43
	Fixed	4.600*	.507	.000	3.34	5.86
Fixed	Mixed	-1.433*	.507	.022	-2.70	-.17
	Growth	-4.600*	.507	.000	-5.86	-3.34

*. The mean difference is significant at the .05 level.

The growth mindset group ($M = 31$) significantly outperformed the fixed mindset group ($M = 25.87$) (Mean Difference = 4.60, $p < .05$).

The mixed mindset group ($M = 26.40$) significantly outperformed the fixed mindset group ($M = 25.87$) (Mean Difference = 1.43, $p < .05$).

Figure 2
Means on posttest of mindset by groups



Discussion and Conclusion

This study was conducted to see the comparative impacts of three types of EFL teachers' mindsets (fixed, growth, and mixed-mindsets) on EFL learners' mindsets. Therefore, the

participants (undergraduate students of translation) were exposed to three different types of mindsets while attending the same grammar course at the university. Consequently, the same questionnaire of Mindset Assessment Profile as that of the pretest was administered and upon administration of the test, the collected data was analyzed to explore the null hypothesis proposed at the outset.

A one-way ANOVA was run to compare the three groups' means on the pretest of mindset in order to prove that they enjoyed the same knowledge on mindset prior to the main study. Similarly, a one-way ANOVA was run to compare the three groups' means on the posttest of mindset in order to probe the null-hypothesis. The results indicated that EFL learners exposed to growth-mindset outperformed significantly from pretest to posttest as compared to those in the other two groups (i.e., fixed and mixed-mindset groups). Therefore, it was demonstrated that the EFL teacher's type of mindset can significantly influence the EFL students' type of mindset.

The findings of the present study could be justified through a number of reasons. The first one is that the same teacher adopting different mindset type in each experimental group went through the same procedure of inductive instruction, a use to usage direction of instruction, formative assessment, E-learning through social networks, cooperative learning, and noticing in understanding grammar on one hand, and embedded speaking and writing skills in using grammar, on the other hand. However, what were enforced as treatments were different mindset types adopted by the researcher in all three experimental groups.

Moreover, the results of the present study could be supported further through studies conducted on the impacts of mindset on different areas of second language acquisition. Lou and Noels (2016) conducted a study on the comparative impacts of priming a fixed-mindset approach (i.e., entity language theory) or a growth-mindset approach (i.e., incremental language theory) on language learners' goals. The results showed that the learners exposed to growth-mindset advocated learning goals regardless of their perceived level of language competence.

Irie, Ryan, and Mercer (2018) investigated the mindsets of 51 pre-service teachers at an Austrian university using Q methodology. The distinctive quality of this study was that in spite of the studies focusing on the learners' mindsets, this one focused on the very mindsets of the EFL teachers. This study not only opened up a new gate through focusing on teachers' beliefs about their own teaching competences but also expanded the methodological repertoire in language education researchers. The second important quality of this study was the potential of Q methodology, a research approach used widely in social sciences and education, yet innovative in the field of language acquisition. The results of the study indicated that the mindsets of pre-service teachers are determined by their strong belief in the learnability of the more technical aspects of teaching. It was also indicated that teachers' mindsets are shaped and constructed through their own management of implicit theories rather than the conventional dichotomous model of mindsets (i.e., fixed versus growth mindset).

No matter how pedagogy and curriculum are planned and performed, the academic achievement could be facilitated or debilitated to a large extent by the very mindsets that students are exposed to (Leung, 2018). Accordingly, we must tap into the students' mindsets through cultivating and promoting growth mindsets in the academic contexts right from scratch.

Moreover, Sarlak, Ghaemi, and Hashamdar (2020) conducted a study in order to investigate the comparative impacts of fixed, growth, and mixed mindsets on EFL learners' grammar achievement. The result of their study indicated that students in growth mindset group significantly outperformed those in the other two groups as far as their final score on grammar achievement was concerned.

The present study, unlike many other studies investigating the impact of mindsets on different domains and skills of language learning that ended up with the positive influences of promoting

and adopting growth mindset attitudes, focused on investigating the ignored influence of teachers' mindsets on students' mindsets which itself can stand alone as one of the most significant features of the present study distinguishing it from numerous other studies conducted so far in this area.

Implications for EFL Teachers

Students' mindsets are shaped in a variety of contexts including family, friends, society, school, social media, teachers, and all other walks of life whether real or cyber-space. However, one of the most influential means of shaping EFL Learners' mindsets is their teachers.

A successful, inspiring EFL teacher is recognized by both his and her ideology and methodology. The personality and mindset of a teacher is as important as the other instructional variables. Therefore, in actual and immediate context of teaching and learning, what are of primary importance are the steps taken by the teacher to promote and to boost a growth mindset ideology among the students so that he could facilitate the process of learning which is one of the most significant objectives of education since the mere academic knowledge of the content areas does not suffice to meet the ends. Accordingly, a number of implications would be made for EFL teachers as follows:

One of the most important factors that can shape and grow the students' mindsets is the teacher's belief system or mindset about intelligence or the innate ability to learn. A growth mindset teacher promotes the ideology that intelligence is malleable and can be grown through the process of education, learning, and all cognitive, metacognitive, and affective factors rather than a fixed trait that can hardly change. Einstein in one of his outstanding quotes says: *the intellectual growth should commence at birth and cease only at death*. A teacher with such an ideology would be successful in rooting and discarding one of the most striking obstacles made against learning and all processes involved in so doing. Students should learn that intelligence is a tiny particle of the total picture of their lives, and there are some much more important factors at work such as their academic tenacity, their volition, their motivations, their strategies, their persistence and perseverance. A growth mindset teacher would never say: "you are not good at English." "Your language ability is not good." "You did your best but you were not born to learn language. Your linguistic intelligence is not so high. You'd better focus on your other types of intelligence where you can be much more successful." Rather, he says: "you should try more." "I think the problem is because of your strategies." "Let's see how you have done this exercise." "May be, I should explain it once more. "The difference between you and your successful peers has nothing to do with just mere linguistic intelligence. Rather, it is more related to different amount of volition, strategies, planning, tenacity put forth by you and them."

We as teachers shall promote the idea right from scratch that failures and setbacks are very natural ingredients and steps in the process of learning and achievement. Consequently, we open a gate to them through which they can welcome all possible challenges in the process of learning. They adopt a variety of strategies and are not afraid of setting high standards since they know they might fail a lot of times before succeeding in so doing. This view will certainly promote a challenge-based perspective toward learning.

Peer or teacher consultation shall be seen as a strategy by students and of course teachers themselves rather than lack of ability or incompetence. Students shall be educated to such an extent that they would resort to all possible means of learning facilitation specially peer consultation or asking for help.

A growth mindset teacher is not an evaluator or a judge. She or he shall be a guide, a friend, a counselor, and even a peer who is himself involved in the process of learning. Students should feel that the formative and summative assessments of teachers are there to boost learning and not to judge them and their abilities.

A growth mindset teacher is not afraid of setting high standards at the outset. Setting such standards is valuable and beneficent not only for students but also for teachers themselves as they are involved in teaching and learning, similarly. They wouldn't set low standards that are easy to achieve. Certainly, high standards include challenges, more tenacity, resiliency, perseverance, persistence, time, energy, different types of strategies, and above all a growth mindset which is not that much sensitive to the judgments in case of making any mistakes.

In a growth mindset-oriented class, learning is not a product-oriented phenomenon which should occur without too much trouble which is itself emanated from a fixed perspective about intelligence. Rather, the idea is that brain is malleable and consequently the intelligence is so. If students do not learn, it does not necessarily mean lack of competence or ability or affective factors. We, as growth mindset teachers shall make use of a lot of strategies, tasks, techniques that ensure that learning would be achieved at the end.

A growth mindset teacher praises students not for their intelligence but for the amount of tenacity put forth by them in order to succeed. He would never say: "well done. You made it because you are the best and the most intelligent student in this class." Rather, he would say: "well done, you made it because you tried more and did make use of different solutions to do so. It is the result of your tenacity." He wouldn't relate the students' achievements to their intelligence since such egregious connections would have numerous negative implications not only for the very student but also for his other classmates.

The quality and quantity of the feedback proposed by a growth mindset teacher is strikingly different from that of a fixed mindset teacher. A fixed mindset teacher is an evaluative judge who is there to issue the verdicts based on the immediate performance of the students. The feedback is shown through the scores and students are labeled accordingly. This categorization starts from the beginning since such teachers hold a fixed perspective about their students. Consequently, it would impact the quality and quantity of the feedbacks given to students by them. They are sensitive to the first mental image they have from their students. Therefore, their feedbacks are shown through their scores. In a fixed mindset framework, a mistake, a low score, a week presentation, a lower-than-expected project are all signs of incompetence. However, a growth mindset teacher never judges them according to their immediate performance. Feedback is not shown only through scores. Teacher is not product oriented here. S/he tries to provide students with different types of feedback that can enhance the quality of learning as s/he believes in growth. Evaluation of students is a means rather than the end. Therefore, formative assessment is a task itself to become a valuable source of feedback. Last but not the least, in a growth mindset framework, feedback is first directed at the teachers themselves rather than students to see what to do, what types of tasks to design, what types of strategies and techniques to apply, what types of modifications to be made in the process of teaching, which areas to focus more.

A growth mindset teacher is process oriented and this would impact the quality of their work from A to Z. S/he knows that s/he is there to make use of all possible means to facilitate learning. In contrast to fixed mindset teachers, who believe in fixedness of their students' ability, they believe that the students with whatever levels are there to learn and his art is to find ways to pave the path for all. There are no categorizations like "week", "talented". Rather, they categorize them as the students who make better use of their learning opportunities and those who do not.

In a class run by a growth mindset teacher, students are there to make mistakes because all impediments to their demonstrations shall be cleared by the teacher. The more they are free to express themselves, the more the number of mistakes they make are. Mistakes and errors are seen as signs of development rather than incompetence. Such teachers believe that so long as their students do not express themselves (avoidance strategy), they are deprived of one of the most

important factors to enhance the quality of learning. And students feel free to do so since they know that they are not going to be labeled for their mistakes.

A growth mindset teacher believes that students are there to learn not to pass. Therefore, the nature of teacher and students' motivations is totally different from those of a class with a fixed mindset teacher. They know that they are there to enjoy learning and to do so the teacher becomes a student himself. Therefore, in such atmosphere, the students' motivations are shifted from scores to learning.

Implications for EFL Learners

EFL learners are to become familiar with the amazing power of their own mindsets in the process of learning. The following implications would be made here for EFL learners to grow their mindsets:

Growth mindset learners know that although they have different abilities and are much more competent in some areas as compared to the others, the number one factor which is of higher stance as to the other factors (namely intelligence) is their tenacity, perseverance, and resilience. They believe in malleability of brain and such belief would make a huge difference. They know that the individual differences they perceive between their peers and themselves emanate from many factors not just the intelligence.

In a growth mindset perspective, such concepts as setback and failure are not seen as obstacles or barriers to achievement. Rather, they are seen as natural ingredients of success especially when you set high standards in your academic life. A growth mindset student is certainly disappointed and disguised with failure like all. However, what makes the difference is the quality of decisions made afterwards. S/he would turn the crisis into an opportunity as a precious source of feedback to see what areas need further or different work.

Growth mindset learners make use of all such possible means in the path of attainment as peer consultation. They always try to be helpful to the others and are not afraid of asking for help themselves. They know that growth requires something beyond their mere competence.

When you are not afraid of judgments of the others about yourself and your abilities, then you are a growth mindset learner, one who can express him/herself without hesitation. This sort of mindset gives them a power that can help them break through all mental obstacles arising from a fixed mindset framework about the importance of judgments made by the others.

Setting high or low standards in life and especially an academic one emanates from our fixed or growth perspectives about ourselves. A growth mindset learner's standards are as high as possible. They know that they can achieve them through their own tenacity, peer consultation, strategy application, and above all through their own mindset that welcome challenges, setbacks, mistakes as signs of development and growth.

A growth mindset student tries to become smart rather than to look smart. Development and growth are much more important to them than the outward manifestation of their performance. They are not outcome oriented; they are process oriented. Therefore, they focus on their growth and process-oriented development. Making mistakes and errors in a growth mindset framework is not threatening to the identity of the learners since they are not sensitive to the judgments made accordingly.

Motivation has an inward orientation as far as growth mindset students are concerned. Setting goals, planning, learning, strategies, problem solving, and achievement are all ingredients of success rather than a mere show off of their performance. Certainly, they would like to be seen and to be approved by the others. However, they won't sacrifice those deep, underlying layers of success which includes setting high standards and challenges, setbacks and failures accordingly.

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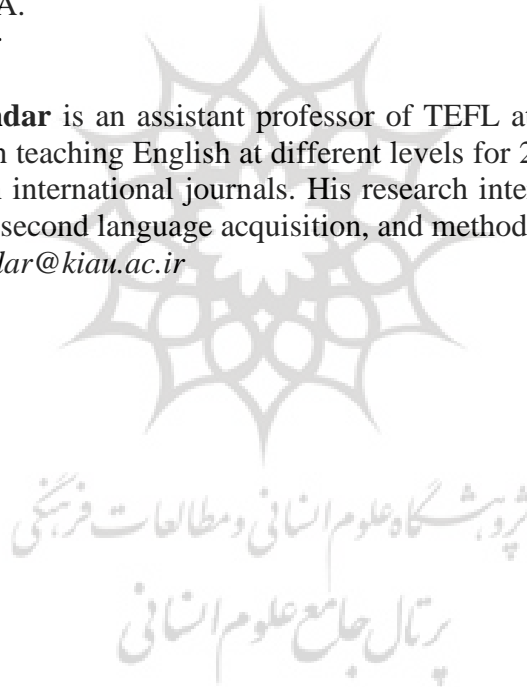
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